

CLAIMS

1. Method of pre-heating a pot (1) provided with anodes (10) and cathodes (5) for the production of aluminium by electrolysis, said method including a first step, prior to the pot being supplied with current, during which a layer of a granular conductive material (25) is deposited and then crushed between the anodes and the cathodes, characterised in that the granular conductive material is graphite-based and in that the layer of granular conductive material (25) only extends, after crushing, over a part of the lower surface (14) of each anode (10) and takes the form of contact blocks (13).

2. Method according to claim 1, characterised in that the layer of granular conductive material (25) covers, after crushing, between 5 and 40% of the lower surface (14) of each anode (10).

3. Method according to claim 2, characterised in that the layer of granular conductive material (25) covers, after crushing, between 5 and 20% of the lower surface (14) of each anode (10).

4. Method according to any one of claims 1 to 3, characterised in that the number of contact blocks (13) associated with each anode (10) is between 3 and 20.

5. Method according to any one of claims 1 to 4, characterised in that the contact blocks (13) have, in cross-section, a general circular or oval shape.

6. Method according to any one of claims 1 to 5, characterised in that each contact block (13) has an initial thickness of between 0.5 and 4 cm.

7. Method according to any one of claims 1 to 6, characterised in that the contact blocks (13) are made using a template (15) placed on the cathodes (5) and including a plate (16) fitted with several orifices (17) into each of which granular conductive material (25) is inserted.

8. Method according to any one of claims 1 to 7, characterised in that 90 to 95% of the graphite grains of the granular conductive material (25) are between 1 and 8 mm in size.

9. Method according to any one of claims 1 to 8, characterised in that the granular conductive material (25) additionally includes at least one other material that is able to vary its resistivity.

10. Method of pre-heating a pot, according to one of claims 1 to 9, characterised in that it includes the following steps:

- forming a layer of the granular conductive material over a part of the surface of a cathode,
- laying each anode on the layer of granular material,
- establishing an electrical connection between the stem of each anode and the anode frame,
- energizing the pot so as to cause an electric current to flow between the cathodes and the anodes.

11. Method according to any one of claims 1 to 10, characterised in that two or more contact blocks (13) have a cross-section of different sizes.